

5214450



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2600-3-130
Job Sheet 198091



Part No: D2600-3-130

Job Qty: 127 pcs

Part Name: Extrusion Round 3" 350



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/22/19

Job Tracking No:

Due Date: 9/13/19

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV E

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier		Sign-off
							Workcenter / Supplier	Lead Time	
100	Purchasing	127 pcs	9/13/19	9/13/19	0.00	0.00	Purchasing - 1		At 19/07/19
							Purchasing - 2		
							Purchasing - 3		
110	Packaging 2-1 - Receive - B4B	127 pcs	9/13/19	9/13/19	0.00	0.00	Packaging 2 - 1 - B4B		
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		
							Packaging 2 - 7 - B4B		
							Packaging 2 - 8 - B4B		
							Packaging 2 - 9 - B4B		
							Packaging 2 - 10 - B4B		
							Packaging 2 - 11 - B4B		
							Packaging 2 - 12 - B4B		
							Packaging 2 - 13 - B4B		
							Packaging 2 - 14 - B4B		
							Packaging 2 - 15 - B4B		
							Packaging 2 - 16 - B4B		
							Packaging 2 - 17 - B4B		
							Packaging 2 - 18 - B4B		
							Packaging 2 - 19 - B4B		
							Packaging 2 - 20 -		

Plex 7/23/19 8:48 AM Dart.Lavoie.Chantal

						B4B	
						Packaging 2 - 21 - B4B	
						Packaging 2 - 22 - B4B	
						Packaging 2 - 23 - B4B	
						Packaging 2 - 24 - B4B	
						Packaging 2 - 25 - B4B	
						Packaging 2 - 26 - B4B	
						Packaging 2 - 27 - B4B	
						Packaging 2 - 28 - B4B	At 14m/17
						Packaging 2 - 29 - B4B	
						Packaging 2 - 30 - B4B	
						Packaging 2 - 31 - B4B	
						Packaging 2 - 32 - B4B	
						Packaging 2 - 33 - B4B	
						Packaging 2 - 34 - B4B	
						Packaging 2 - 35 - B4B	
						Packaging 2 - 36 - B4B	
120 QC 18	127 pcs	9/13/19	0.00	0.00		QC 18 - 12	
						QC 18 - 14	
						QC 18 - 22	
						QC 18 - 25	
						QC 18 - 48	
						QC 18 - 58	
						QC 18 - 61	
						QC 18 - 9	
						QC 18 - 81	
130 Packaging 3-1 - Stock - B4B	127 pcs	9/13/19	0.00	0.00		Packaging 3 - 1 - B4B	
						Packaging 3 - 2 - B4B	
						Packaging 3 - 3 - B4B	
						Packaging 3 - 4 - B4B	
						Packaging 3 - 5 - B4B	
						Packaging 3 - 6 - B4B	
						Packaging 3 - 7 - B4B	
						Packaging 3 - 8 - B4B	
						Packaging 3 - 9 - B4B	
						Packaging 3 - 10 - B4B	
						Packaging 3 - 11 - B4B	
						Packaging 3 - 12 - B4B	
						Packaging 3 - 13 - B4B	
						Packaging 3 - 14 - B4B	
						Packaging 3 - 15 - B4B	
						Plex 7/23/19 8:48 AM Dart.Lavoie.Chanta	

DAS
61
9-89

				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	W
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	DAG
140 QC 21 - SA	127 pcs	9/13/19	0.00 0.00	QC 21 - SA - 21	21
				QC 21 - SA - 70	9-89
				QC 21 - SA - 53	

OCT 01 2019

Part Op 100 - (Purchasing) Issue P/O: _____ a) Extrude as per Dwg D2600 (130" long) b) Material: 6061-T6 c) Descriptions: Material certification is required. ***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** **MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE***

110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure material certification is attached

120 - (QC18 In-Coming Inspection Material) Check Pull test per Dwg D2600 for compliance page attached Check hardness with Webster tester

130 - (Identify as per dwg & Stock Location: _____) LOCATION : LG002

140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-130P	Extrusion Round 3" 350	127 pcs (1 ea)	100-Purchasing	5214397

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D2600-3-130P	127	0	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Extrusion	0.375inches $\pm$ 0.010	0.385 0.365		
2	Extrusion	2.810inches $\pm$ 0.032	2.842 2.778		
3	Extrusion	3.150inches $\pm$ 0.032	3.182 3.118		
4	Extrusion	2.840inches $\pm$ 0.032	2.872 2.808		
5	Extrusion	0.075inches $\pm$ 0.010	0.085 0.065		
6	Extrusion	0.155inches $\pm$ 0.010	0.165 0.145		
7	Extrusion	3.000inches $\pm$ 0.032	3.032 2.968		

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SPECIFICATION CONTROL DRAWING

D2600-X-XXX EXTRUSION



NOTES:
1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 40 KSI
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)

7) WEIGHT: D2600-1 = 0.078 lb/in, D2600-3 = 0.130 lb/in, D2600-5 = 0.045 lb/in, D2600-7 = 0.091 lb/in

8) NO TOOLING MARKS

9) FOR D2600-1, PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH (EX. D2600-1-160 IS 160" LONG).
D2600-1 EXTRUSION MANUFACTURED FROM:

- CARADON INDALEX DIE # MH-18870
- SIGNATURE ALUMINUM (BON-L) DIE # 897121

10) FOR D2600-3, PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH (EX. D2600-3-120 IS 120" LONG).
D2600-3 EXTRUSION MANUFACTURED FROM:

- CARADON INDALEX DIE # MH-18859
- SIGNATURE ALUMINUM (BON-L) DIE # 897122

11) FOR D2600-5, PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH (EX. D2600-5-108 IS 108" LONG).
D2600-5 EXTRUSION MANUFACTURED FROM:

- CARADON INDALEX DIE # MS-18871

12) FOR D2600-7, PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH (EX. D2600-7-125 IS 125" LONG).
D2600-7 EXTRUSION MANUFACTURED FROM:

- CARADON INDALEX DIE # MS-18872

RELEASED
2012-01-11

REV.	DESCRIPTION	BY	DATE
E	REFORMAT DWG; ALL DIMS & TOL. UPDATE TO MATCH MFG DIE DWGS; ADD ASTM B221 SPEC (08-1)	CP	11.10.18
D	INCREASE MIN. UTS TO 40 KSI	DS	06.06.20
C	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	DS	06.04.18
B	CHANGE MATERIAL SPEC.	DS	07.06.09
A	NEW ISSUE	DS	07.01.21
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.10.18		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

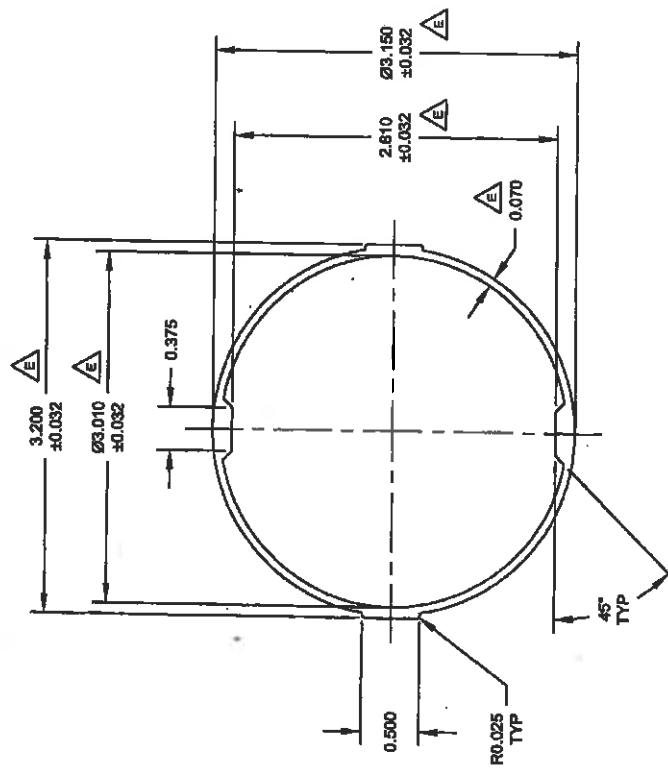
DRAWING NO.
D2600

REV. E
SHEET 1 OF 3

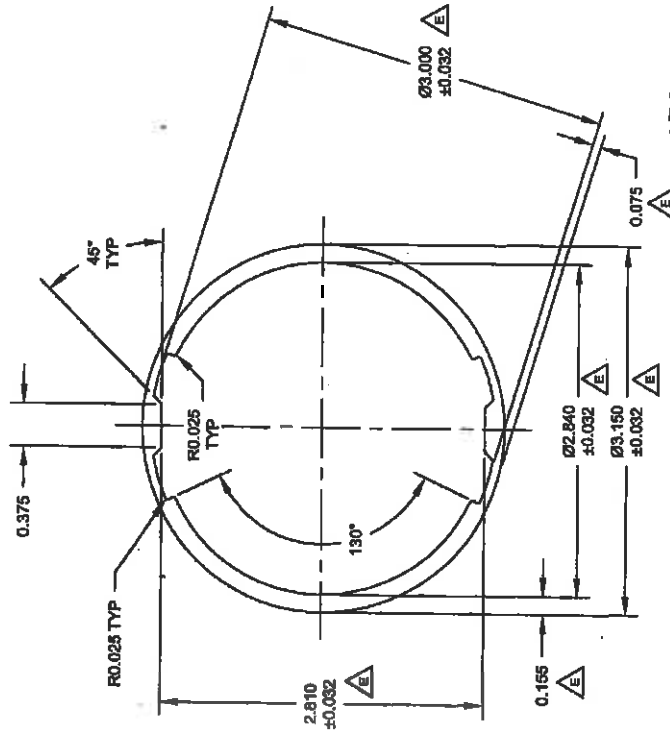
TITLE
EXTRUSION

SCALE
NTS

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D2600-1 EXTRUSION



D2600-3 EXTRUSION

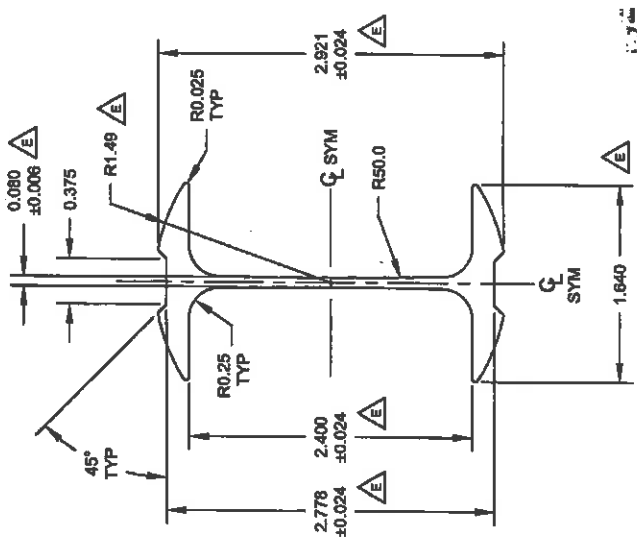
RELEASED
2012-01-10

DESIGN	4	DART AEROSPACE LTD	REV. E
DRAWN	4	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A/S	DRAWING NO.	SHEET 2 OF 3
MFG. APPR.	E	D2600	SCALE
APPROVED	W/P	TITLE	EXTRUSION
DATE	11.10.18	DATE	NTS

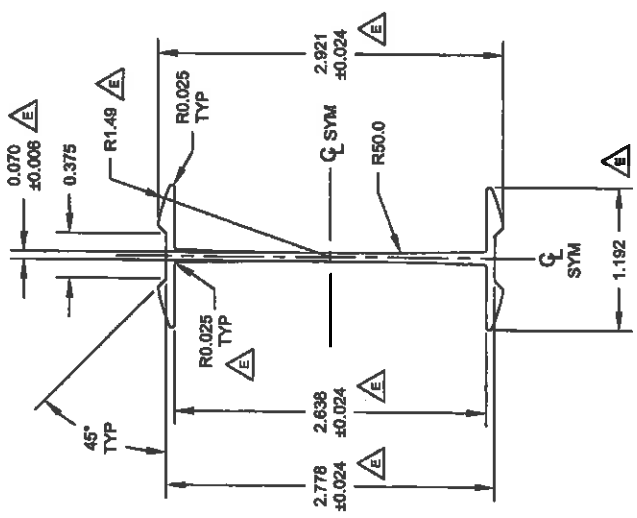
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1 2 3 4 5 6 7 8

D C B A



D2600-7 EXTRUSION



D2600-5 EXTRUSION

DESIGN	4	DART AEROSPACE LTD
DRAWN	ASS	HAWKESBURY, ONTARIO, CANADA
CHECKED	ASS	REV. E
MFG. APPR.	ASS	D2600
APPROVED	ASS	SHEET 3 OF 3
DE APPR.	ASS	TITLE
DATE	11.10.18	EXTRUSION
		SCALE
		NTS

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **POHB044090**



Supplier: SIG001-VC
Signature Aluminum Canada Inc.
C/O/ T10322C
PO Box 4488, STN A
TORONTO
ON
M5W 4H1 Canada
Phone: 905-427-6550
Fax: 905-427-2246

PO No: POHB044090
PO Date: 7/23/19
Due Date: 9/13/19
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
Phone: 613-623-5200 Ext: 242
Fax: 613-632-1053
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments: quote date, July 22

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	198091	D2600-3-130P		Extrusion Round 3" 350 : Extrude as per dwg D2600-3 REV. E EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE	Received	-	9/13/19	127 pcs	127 pcs ✓ 127x	0 pcs M19/20/17	\$46.399212/pcs	\$0.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044090



Items												
Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2		D2600-3-130P		Extrusion Round 3" 350 : Extrude as per dwg D2600-3 REV. E EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE	Firmed	-	9/18/19	8 pcs /	0 pcs 8x	8 pcs	\$46.399212/pcs At 14p V17	\$371.19
Grand Total:												\$371.19

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

- A005 RIGHT OF ENTRY
- A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
- A012 CHEMICAL AND PHYSICAL TEST REPORTS
- A016 PERSONNEL QUALIFICATION
- A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
- A026 CERTIFICATION OF MATERIAL CONFORMANCE
- A041 QUALITY MANAGEMENT SYSTEM
- A042 DART NOTIFICATION BY SUPPLIER
- A043 RETENTION OF QUALITY DOCUMENT
- A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM
- A049 SUPPLIER AWARENESS

Plex 9/17/19 2:46 PM Dart.Guerin.Kimberley

**SIGNATURE ALUMINUM CANADA**1850 CLEMENTS RD
PICKERING, ON L1W 3R8**CERTIFICATE OF COMPLIANCE**

Cert Date	Cert No	Sales Order	Page
09/04/2019	5546741	137251	1
Cust PO	B/L No	Lot	Date
POHB044090	044556	924392	09/11/19

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
001	DAA-897122-2	130" Mill 6061 T6	D2600-3-130P
Gross Weight	2,326 LBS		
Net Qty	2,220 LBS		
		135 PCS	3 PKGS
Specification			Die Desc
AMS-QQ-A-200/8 & ASTM B221-08			

Mechanical Tests:

<u>Tensile</u>	<u>Yield</u>	<u>% Elongation</u>	<u>Conductivity</u>	<u>HRE</u>
MPA / KSI	MPA / KSI			
309.0 / 44.8	271.8 / 39.4	13.8	N/A	94

Chemical Analysis:

<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>V</u>	<u>Zr</u>
0.60	0.28	0.21	0.05	0.87	0.08	0.20	0.02	0.01	0.00

*This Material is Made in Canada**This Material is RoHS Compliant*

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Gooder
Quality Manager
Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

Visit us at www.signaturealum.com

Rev A

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D2600-3-130

PO / BATCH NO.: POHBA44090/S214450

DATE: 19/09/17

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 3.150"

QUANTITY RECEIVED: 1352

THICKNESS RECEIVED: 3.150"

QUANTITY INSPECTED: 1352

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 5k

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	☒	☐	3 dented
CORRECT FINISH	☒	☐	
CORROSION	☐	☒	
CORRECT GRAIN DIRECTION	☒	☐	
CORRECT MATERIAL PER M-DRAWING	☒	☐	AMS QQ-A-200B
CORRECT THICKNESS	☒	☐	
PHOTO REQUIRED	☐	☐	
CORRECT REF # TO LINK CERT	☒	☐	POHBA44090
CORRECT MATERIAL IDENTIFICATION	☒	☐	
CORRECT M# ON THE MATERIAL	☒	☐	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	☐	☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	☐	☒	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>61</u> <u>9-89</u>	SIGNED OFF BY: _____		
DATE: <u>SEP 27 2019</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in